

WHAT IS CLAIMED IS:

1. A method of selecting a symbol table, comprising:  
providing a plurality of symbol tables in a  
computer system, said computer system having an  
address pointer, each of said symbol tables  
5 encompassing a range of addresses;  
identifying at least one of said plurality of  
symbol tables within whose range of addresses said  
address pointer is pointing; and  
selecting said at least one of said plurality  
10 of symbol tables.
2. The method of claim 1, wherein a debugger connected  
to said computer system performs said identifying  
and said selecting of said at least one of said  
plurality of symbol tables.
3. The method of claim 2, wherein said identifying and  
said selecting is performed each time said debugger  
transitions from an executing mode to a command  
mode.
4. The method of claim 1, wherein said computer system  
performs said identifying and said selecting of said  
at least one of said plurality of symbol tables.
5. The method of claim 1, wherein said address pointer  
comprises a pointer to a memory location containing  
instructions to be executed.
6. The method of claim 5, wherein said pointer  
comprises a program counter.

7. The method of claim 1, wherein said computer system comprises a plurality of cells, each of said cells comprising a processing unit having at least one computer processor, the method further comprising identifying an active cell among said plurality of cells, wherein said symbol table is being selected for said active cell.
8. The method of claim 7, wherein said plurality of symbol tables includes at least one base symbol table and a plurality of secondary symbol tables, and wherein said identifying said at least one of said plurality of symbol tables comprises:
- examining said at least one base symbol table to determine whether said address pointer is pointing within said at least one base symbol table; and
- examining at least one of said plurality of secondary symbol tables to determine whether said address pointer is pointing within said at least one of said plurality of secondary symbol tables, wherein said at least one of said plurality of secondary symbol tables is associated with said active cell.
9. The method of claim 8, wherein said plurality of symbol tables are contained in a symbol table set, and wherein each of said plurality of secondary symbol tables comprise a reference to a base symbol table, a cell identifier, and an address offset specifying an offset from said base symbol table.

10. The method of claim 8, wherein said at least one base symbol table is examined before said at least one of said plurality of secondary symbol tables is examined.
11. The method of claim 8, wherein said at least one of said plurality of secondary symbol tables is only examined if said address pointer is not pointing within said at least one base symbol table.
12. The method of claim 8, wherein said examining at least one of said plurality of secondary symbol tables comprises checking a cell identifier within each of said plurality of secondary symbol tables to determine whether each of said plurality of secondary symbol tables is associated with said active cell, and examining only tables within said plurality of secondary symbol tables which are associated with said active cell to determine whether said tables which are associated with said active cell should be selected.
13. The method of claim 1, wherein said at least one of said plurality of symbol tables is selected by marking said at least one of said plurality of symbol tables as active.
14. The method of claim 13, further comprising a debugger using a symbol table among said plurality of symbol tables which is marked as active.
15. The method of claim 1, wherein said computer system comprises an architectural simulator.

16. An apparatus for automatically selecting a symbol table in a computer having a program counter and a plurality of symbol tables, the apparatus comprising:

- 5           a) at least one computer readable storage medium; and
- b) computer readable program code stored on the at least one computer readable storage medium, the computer readable program code comprising:
- 10           i) code for identifying one of said plurality of symbol tables wherein said program counter in said computer contains an address within said one of said plurality of symbol tables; and
- 15           ii) selecting said one of said plurality of symbol tables.

17. The apparatus of claim 16, wherein each of said plurality of symbol tables includes symbols stored within an address range, and wherein said code for identifying said one of said plurality of symbol tables comprises determining whether said program counter contains an address within said address range for said one of said plurality of symbol tables.

18. The apparatus of claim 16, wherein said code for identifying one of said plurality of symbol tables comprises code for determining whether said program counter contains an address within a base symbol table in said plurality of symbol tables.

19. The apparatus of claim 16, wherein said code for identifying one of said plurality of symbol tables comprises code for determining whether said program counter contains an address within an offset symbol table in said plurality of symbol tables.
20. The apparatus of claim 19, wherein said computer comprises a plurality of processing cells.
21. The apparatus of claim 20, wherein said code for identifying one of said plurality of symbol tables further comprises code for determining whether a cell identifier in said offset symbol table refers to one of said plurality of processing cells which is executing said computer readable program code.
22. The apparatus of claim 16, further comprising code for determining whether said one of said plurality of symbol tables is enabled for automatic selection.
23. A debugging apparatus, comprising:  
a computer having a plurality of symbol tables stored thereon;  
a debugger connected to said computer; and  
automatic symbol table selection means for automatically selecting at least one of said plurality of symbol tables in said computer for said debugger.
24. The debugging apparatus of claim 23, wherein said computer comprises a plurality of processing cells.

25. An apparatus for automatically selecting a symbol  
table in a computer having a plurality of processing  
cells and having a plurality of symbol tables stored  
thereon, each of said plurality of symbol tables  
having a cell identification to indicate for which  
of said plurality of processing cells it is  
intended, the apparatus comprising:

a) at least one computer readable storage  
medium; and

b) computer readable program code stored on  
said at least one computer readable storage medium,  
the computer readable program code comprising code  
for selecting at least one symbol table which is  
intended for use with the processing cell which is  
executing said computer readable program code.